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8 May 2006

Mr. Dwight E. Sanders
California State Lands Commission
Division of Environmental Planning and Management
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

RE: Review of Revised Draft Environmental Impact Report (Revised DEIR) for Cabrillo Port Liquefied Natural Gas (LNG) Deepwater Port (DWP)

Dear Mr. Sanders:

I have reviewed the above captioned report particularly Section 4.2 Public Safety: Hazards and Risk Analysis and its discussion of thermal radiation and vapor dispersion hazards. This section of the Revised DEIR summarizes the process and findings of a site-specific Independent Risk Assessment (IRA) and its subsequent review by Sandia National Laboratories (SNL) included as Appendix C2 (Sandia Report "Review of the Independent Risk Assessment of the Proposed Cabrillo Liquefied Natural Gas Deepwater Port Project" by Hightower et al. printed in January 2006 as SAND2005-7339). The Revised DEIR summarizes formal comments made concerning the October 2004 Draft EIS/EIR prepared for the Cabrillo Port project. The Revised DEIR makes use of the SNL report "Guidance on Risk Analysis and Safety Implications of a Large Natural Gas (LNG) Spill over Water" by Hightower et al. (SAND2004-6258) printed in December 2004.

The IRA report (Appendix C1 of the Revised DEIR) identifies objectives of the independent risk assessment process as (quoting from the report page ES-1):

- Objectively evaluate the potential impacts on public safety posed by the proposed Project; specifically, identify and evaluate public exposure from potential LNG release scenarios and recommend risk reduction measures;
- Address scoping comments on the risks solicited through the NEPA/CEQA process;
- Use an assessment process that is transparent and available for review to the greatest extent possible by the public, elected officials, and agencies, subject to limitations imposed by security considerations;
- Use an assessment process that incorporates the guidance provided by Sandia National Laboratory for Risk Analysis of a Large Liquefied Natural Gas Spill over Water; and
- Conduct a site-specific, project-specific assessment.

The IRA report states on several occasions that "independence was paramount in this study". However, the level of independence of this study may have been compromised because the stated objective was to use a process that incorporated the previous guidance of SNL from December 2004. One of the members of the External Peer Review Panel identified in SNL's 2004 report is Dr. Ron Koopman who identified himself as a consultant to BHP Billiton several months prior to SNL's 2004 report.

Despite this apparent lack of objectivity, the SNL review by Hightower et al. of the IRA was beneficial because some errors in the original analysis were identified (summarized on pg 23 of the SNL report). It is important to note that none of these errors could have been detected solely from the original Draft EIS/EIR or the Revised DEIR due to insufficient detail of the reports. Obviously, full disclosure to the public of modeling details for the purpose of independent peer review and public comment to the extent possible is beneficial to all parties.

Depending on the identified scenarios by which containment of LNG can be lost, impact to public safety is typically assessed on the basis of the following potential hazards:

- Vapor dispersion hazards. This potential impact to public safety is determined by the downwind distance to which the LNG vapor will remain flammable.

- Thermal radiation due to a pool fire. This potential impact to public safety is determined by the downwind distance to which a burning LNG pool will be harmful due to thermal radiation exposure to the public.

Other potential hazards associated with LNG have been identified, but the hazards outlined above have been assessed for onshore facilities as specified by 49 CFR 193. (The original Draft EIR/EIS listed 49 CFR 193 as part of the "Key Elements and Thresholds" used in the preparation of the report, but the Revised DEIR makes no reference to 49 CFR 193.) For LNG spills on water, the assessment of these hazards was addressed for the Federal Energy Regulatory Commission (FERC) by ABS Consulting. Under contract number FERC 04C40196, ABS Consulting summarized methods for determining pool fire thermal radiation and vapor dispersion hazards. The pertinent reports are "Consequence Assessment Methods for Incidents Involving Releases from Liquefied Natural Gas Carriers" (dated 13 May 2004) and "Notice of Availability of Detailed Computations for the Consequence Assessment Methods for Incidents Involving Releases from Liquefied Natural Gas Carriers" (dated 29 June 2004) as part of FERC Docket No. AD-04-6-0000. Public comment was accepted on the original report resulting in modeling revisions as summarized in the later report.

The Revised DEIR summarizes accident consequences in Table 4.2-1 (pg 4.2-2) based on three scenarios:

- Marine collision. Release of half of one FSRU tank through a very large breach onto water. Pool fire and vapor cloud dispersion/flash fire consequences are considered.

- Intentional. Release of the contents of two FSRU tanks through a large breach in each tank onto water. Pool fire and vapor cloud/dispersion/flash fire consequences are considered.

- Escalation. Release of total contents of up to two FSRU tanks onto water. This escalation scenario addresses the impact to public safety if either a marine collision or intentional event (the previous scenarios) results in a fire that causes the failure of the remaining tanks on the FSRU. Only pool fire consequences are considered since the escalation is presumed to occur because an ignition source will be readily available.

From these scenarios, the impact to public safety is assessed in the IRA on the basis of the following potential hazards:

- Vapor dispersion hazards. The report specifies their use of the term LNG to be a hydrocarbon mixture composed primarily of methane with concentrations of 85 to 96% (molar basis); heavier hydrocarbons such as propane, ethane, and butane make up the balance of the mixture. The lower flammable limit (LFL) of a (pure) methane/air mixture is reported and used throughout the work in place of the LFL for LNG vapor; this assumption is valid for higher methane concentrations and is less appropriate as the concentration of heavier hydrocarbons in the LNG increases. The presence of heavier hydrocarbons decreases the LFL; for 85% methane/15% propane, the LFL is approximately 4.1% (compared with 5% for methane).

- Thermal radiation hazard due to a flash fire. This potential impact to public safety is based on the ignition of a LNG vapor cloud after it is formed. The maximum potential impact to public safety is assessed as follows: The LNG is spilled on the water and is assumed not to be ignited until the flammable cloud reaches its maximum extent of the LFL, and while at this maximum extent, the vapor cloud is ignited. For such a fire, thermal radiation hazards will extend in all directions from the burning vapor cloud.

- Thermal radiation due to a pool fire. This potential impact to public safety is based on the ignition of the spilled LNG before a significant vapor cloud can form. The maximum potential impact to public safety is assessed as follows:

> The LNG is spilled on the water and the evolving LNG vapor is assumed to be ignited quickly resulting in a pool fire. For such a fire, thermal radiation hazards are assumed to extend in all directions from the fire.

The Revised DEIR also discusses other potential hazards of LNG particularly cryogenic temperatures (pg 4.2-18), but the hazards and scenarios outlined above have a greater potential impact on public safety.

The Revised DEIR does not properly account for the impact on public safety by vapor dispersion hazards because it uses the LFL of methane to assess such a hazard. As discussed above, the impact to public safety will be determined by the downwind distance to which the LNG vapor will remain flammable. The lower flammable limit (LFL) of (pure) methane/air mixtures are reported and used in the report; the LFL is determined experimentally for concentrations when the gases (air and methane in this case) are well mixed. However in the atmosphere, it is well understood that gas clouds such as considered here are not well mixed. Evans and Puttock ("Experiments on the Ignition of Dense Flammable Gas Clouds", International Symposium on Loss Prevention and Safety Promotion in the Process Industries, Cannes, September 1986) report that "small flames" can be observed to concentrations reaching 60% of the LFL. For on-shore facilities, 49 CFR 193 requires the determination of exclusion zones for vapor hazard distances to be based on LNG vapor concentrations of 2.5% (or 50% of the methane LFL). As discussed above, the Draft EIR/EIS listed 49 CFR 193 as part of the "Key Elements and Thresholds" used in the preparation of the report, but the Revised DEIR makes no reference to 49 CFR 193. This issue was also addressed in the publicly reviewed FERC report where vapor dispersion hazard distances were determined based on the 2.5% level (50% of the methane LFL). **The dispersion hazard distances will be significantly longer if estimated on the basis of some percentage of the LFL for LNG vapor in place of the Revised DEIR basis of using the LFL for methane.**

The vapor dispersion hazard analysis in the Revised DEIR is based on a computer model which has not been adequately verified or validated for this application. The Revised DEIR uses the publicly available computational fluid dynamics (CFD) model Fire Dynamics Simulator (FDS). FDS is a sophisticated computer model which has been studied with regard to simulation of fires; its stated intended purposes include:

- Low speed transport of heat and combustion products from fire
- radiative and convective heat transfer between the gas and solid surfaces
- Pyrolysis
- Flame spread and fire growth
- Sprinkler and heat detector activation
- Sprinkler sprays and suppression by water

from page 6 of "Fire Dynamics Simulator (Version 4) Technical Reference Guide," NIST Special Publication 1018, Kevin McGrattan, editor. Specifically, FDS has not been verified for the purpose of predicting the dispersion of LNG vapor. It is well established that denser-than-air gases such as LNG vapor behave according to different physical rules than are used in FDS. There is no address of this concern in the Revised DEIR such as by considering how FDS or the boundary conditions used in the simulation can model the effects of the denser-than-air LNG vapor.

The IRA and SNL reports both refer to a validation exercise involving simulation of two field scale releases of LNG (Burro 8 and 9) with FDS. The validation exercise notes that these tests have been used by other investigators when considering dispersion model validation citing a paper on which I am a co-author. However, they fail to recognize that the paper they cite refers to comparison with 29 field scale tests. Since publication of that paper, there has been extensive wind tunnel scale tests aimed at providing an extensive data set whereby CFD models such as FDS can be validated for application to LNG vapor dispersion, and comparison with those data sets is not made in the IRA or SNL reports. The Burro 8 and 9 experiments are well known to show how terrain influences dispersion of a denser-than-air gas such as LNG vapor, but the SNL report indicates "The Burro series is the most appropriate data set for model result comparison," attributed to R.P. Koopman et al., "Burro Series Data Report – LLNL/NWC 1980 LNG Spill Tests," UCID-19075, Lawrence Livermore National Laboratory, Livermore, CA, 1982. The FDS simulations considered in the IRA and SNL reports do not take the effect of terrain into account but indicate the level of agreement is adequate given the sophistication of their modeling efforts. *The validation exercise reported in the Revised DEIR is inadequate in comparison with previous work in the field because of its limited scope.*

The SNL report does indicate that the FDS simulations were repeated on successively refined grids (two simulations: 5 m by 5 m by 1m resolution and 1 m by 1 m by 1 m resolution) as recommended in the FDS Technical Reference Guide. For the two simulations, the FDS simulations gave comparable results as would be desired (termed to be a "grid independent solution"). When applied to the vapor dispersion scenarios for the Revised DEIR, SNL and IRA reports indicate that two resolutions were again used (resolutions of 20 m by 20 m by 20 m and 10 m by 10 m by 10 m), but the two solutions did not show grid independence. In recognition of the difficulty of this problem, SNL *assumes* that the longer of the two distances adequately reflects the vapor cloud dispersion and subsequent flash fire hazard.

The Revised DEIR does not properly account for the impact on public safety by pool fire hazards because of the method used to model LNG pool spreading. The extent of the pool from an unconfined LNG spill on water is very important in the determination of the hazard distance associated with a pool fire. The Revised DEIR relies on the same methodology put forward by SNL and used in the first FERC report: the maximum extent of the spreading LNG pool is limited by how quickly LNG is spilled into the pool. After public review, the final FERC document (29 June 2004) recognizes that the LNG pool will continue to spread until the

pool is so thin it can no longer spread as a liquid pool. **The pool fire hazard distances will be significantly longer if estimated using the publicly reviewed FERC LNG pool spreading model in place of the Revised DEIR model.**

The Revised DEIR does not properly account for the impact on public safety by pool and flash fire hazards because it uses the criterion of 5 kW/m^2 to assess such a hazard. The extent of the thermal radiation hazard from a pool fire or a vapor cloud fire depends importantly on the radiation level used to determine the hazard. The Revised DEIR determines thermal radiation hazard zones based on exposure to 5 kW/m^2, which would be expected to produce second degree burns after 30 s exposure and third-degree burns (1% fatality) after 50 s exposure. A lower thermal radiation exposure level was used in the Draft EIS/EIR of 1.6 kW/m^2 because this is the thermal radiation level to which people can be exposed without harm for extended periods of time. The Revised DEIR notes that 1.35 kW/m^2 is the solar constant in a seeming attempt to compare this lower thermal radiation criterion (1.6 kW/m^2) to a bad sunburn. However, the solar constant is the (normal) incident solar radiation *outside* the earth's atmosphere. The recognized *maximum* incident solar radiation at sea level is only about 1.0 kW/m^2. **Thermal radiation hazard distances will be significantly longer if estimated using the criterion of 1.6 kW/m^2 in place of the Revised DEIR criteria.**

In summary, the Revised DEIR was prepared to address the objectives quoted at the beginning of this letter. The process of oversight of the IRA by SNL has greatly improved the Revised DEIR. In the Draft EIS/EIR, the maximum estimated hazard distance was 2.6 km, which was well within the proposed Area to be Avoided (ATBA) of 3.7 km (2 NM). In the Revised DEIR, the maximum pool fire hazard distance is 3.2 km based on the criteria of 5 kW/m^2; if the criteria of 1.6 kW/m^2 is used as was done in the Draft EIS/EIR, this distance will approximately double to 6.4 km exceeding the ATBA and overlapping the Traffic Separation Scheme (TSS). In the Revised DEIR, the maximum vapor cloud fire distance is 11.7 km, which will exceed the ATBA and overlap the TSS. There are several issues this situation presents:

- The danger to vessels in the ATBA and TSS is acknowledged, and based on average traffic, there would be three vessels exposed to a vapor cloud fire under the worst scenario studied using the conclusions in the Revised DEIR. The Revised DEIR indicates that "Vessels in the area could be notified during this time", but the important question may hinge on what action affected vessels will be advised to take. This question has not been addressed in the Revised DEIR.

- The Draft EIR/EIS reported hazard distances that were within the ATBA, but now that the Revised DEIR reports hazard distances outside the ATBA, there has been no recommended change in the ATBA. Regulations pertaining to on-shore facilities require that control be exercised over property identified as an exclusion zone based on thermal radiation and vapor cloud hazard assessment. It would seem reasonable that the same principle should apply here – hazard zones should

not extend past the Area to be Avoided.

- The summary of public safety impacts and mitigation measures for the FSRU identifies Impact PS-1 as having a limited area of effect and meets the criteria of a Class II impact, and one of the mitigation measures identified is to establish the ATBA of 2 NM (AM PS-1d). Impact PS-2 deals with release of LNG with hazards extending beyond the 500 m safety zone and meets the criteria of a Class I impact (causing a loss of life or serious injury to people other than those employed by the Project). Impact PS-2 offers the same mitigation measure (AM PS-1d) without additional comment essentially saying that loss of life is threatened, but the ATBA is not recommended to be changed. A feasible mitigation measure that would mitigate this hazard is to extend the ATBA so that hazard zones do not extend past the ATBA.

As stated above, these issues are based on the hazard zones as reported in the Revised DEIR; the current recommendations of risk reduction measures seem to be inadequate.

Best regards,

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Consulting Chemical Engineer

Safety fears for fleet of new LNG tankers after leaks are found

- Soaring demand for gas raises pressure on BG
- Scare adds to alarm over 'floating bombs' since 9/11

Terry Macalister
Wednesday December 21, 2005
The Guardian

http://business.guardian.co.uk/story/0,16781,1671607,00.html

A fleet of new ships built for BG and other companies to meet Britain's growing energy needs by bringing in liquefied natural gas (LNG) from abroad has been hit by leaks and safety scares.

The Methane Kari Elin, which was delivered 18 months ago from a South Korean yard, has been withdrawn from service and is heading back to the far east to try to establish what has gone wrong.

A second ship - the Gaz de France Energy - is currently undergoing repairs at the Chantiers de l'Atlantique shipyard in France after gas leaks were discovered in tests, even before the vessel was handed over by the shipbuilder. One BP vessel - built to similar designs in the same Samsung yard in Seoul - is being inspected but two others have been passed and are working normally.

The problem is worrying the industry because no one has yet discovered what the exact causes of the problems are and there are fears of a design problem that could affect up to 20 vessels. The ships are needed to service a massive increase in demand for LNG in Britain, the United States and elsewhere as the indigenous supplies of natural gas from the North Sea run out.

National Grid, operator of the newly- opened Isle of Grain LNG import terminal in Kent, said yesterday that it was considering a second expansion scheme to increase capacity by half.

Shipbuilders and owners are highly conscious of safety as they are aware that LNG is highly flammable, hence fears after 9/11 about these ships being hijacked by terrorists and used as floating bombs.

The maritime faults are believed to centre around the gas containment tanks inside the hulls of the vessels. There are concerns that there might be a problem with the glue used to secure the inner lining of the tanks. BG last night played down the danger associated with the problem, saying there had been no actual gas escapes, just leaks of nitrogen used to cool the LNG inside the system.

"There was migration in the level of nitrogen but only in the secondary barrier," said a BG spokesman. "Things point to a construction application rather than a design fault."

The company confirmed that the Methane Kari Elin was now on its way back to a Samsung Heavy Industries shipyard in South Korea to ascertain exactly what is wrong. "We hope for a definitive answer shortly," said BG.

The company owns eight LNG tankers but has a further seven newly built ships scheduled to be handed over by the end of 2007. It has been forced to find alternative ways of meeting its contractual needs to ship LNG on the Methane Kari Elin but declined to give any details.

Shipbrokers say that the British company could have to pay more than £20,000 a day to charter a replacement vessel and BG has admitted that the Methane Kari Elin could take at least six months to be repaired.

One top shipbroker, who asked not to be named, said: "It's pretty serious. Given the health and safety issues around LNG, BG has to go overboard to resolve this."

Tthe Gaz de France Energy and the Methane Kari Elin are vessels with a capacity of 74,000 and 138,000 cubic metres respectively but built with cargo tanks designed and produced by Gaz Transport & Technigaz in France.

The shipping industry newspaper TradeWinds says the faults have raised concerns for owners and operators of at least 20 other LNG tankers, either delivered or under construction.

Samsung said in a statement that it planned to meet companies that had taken delivery of its Mk III-type LNG carriers "to provide a technical appraisal of the problem".

NLNG pipeline explosion: 11 feared missing

• *Wednesday, August 31, 2005*

http://www.thetidenews.com/article.aspx?qrDate=08/31/2005&qrTitle=NLNG%20pipeline%20explosion:%2011%20feared%20missing&qrColumn=FRONT%20PAGE

Eleven persons are feared missing and aquatic life completely destroyed when a 28-inch Liquefied Natural Gas underground pipeline exploded at Kalakama, an Ogoloma fishing community in Okrika Local Government Area of Rivers State.

The incident, which occurred at the weekend, resulted in a wild inferno which engulfed an estimated 27 square kilometers of the once rich Kalakama mangrove, killing sea foods and cash crops.

So huge, the impact of the explosion was felt on the Okrika Island and the Borikiri area of Port Harcourt where, residents were forced into a stampede for safety.

Problem started more than two months ago, when a minor gas leakage was noticed by inhabitants of the Kalakama fishing community, upon which a formal report was said to have been lodged with Nigeria Liquefied Natural Gas Limited (NLNG) by His Royal Majesty, Chief Nemi Tamunoiyalla-Oputibeya, Amanyanabo of Koniama.

The leakage assumed a frightening dimension, last week Monday, when a wild fire was first reported, before culminating in a major gas explosion.

It took NLNG fire fighters, using hi-tech helicopter services, more than 48 hours to put out the fire, but not before shutting down the NLNG gas plant at Rumuoji substation.

Rivers State Environment Commissioner, Dr. Roseline Konya, on a visit to the area, last Monday described the incident as a great disaster, and blamed it on bureaucratic delays by companies in treating life threatening complaints.

Leader of the Okrika delegation and chairman of the Okrika Divisional Council of Chiefs, Chief Taribo Sekibo-Oduobaji blamed the incident on negligence on the part of NLNG.

Chief Oduobaji, who was a Second Republic Senator of the Federal Republic of Nigeria, and chairman of the Senate Committee on Petroleum and Gas Matters, said it was unimaginable that a report involving gas leakage could be allowed to snow-ball into such huge disaster.

The chiefs' delegation later visited the Kalakama community, which was half deserted.

Briefing the chiefs there, the community head, Elder Iyengiyikabo Kaizer Fienemika said able-bodied youths were still searching for 11 persons feared missing during the weekend stampede, while three elders were rushed to hospital, on Okrika Island after inhaling excessive gas.

Meanwhile, Chief Oduobaji has called on the Federal Government and relevant disaster

agencies to come to the rescue of the primary victims now denied a source of livelihood.

Leader of the NLNG delegation during the inspection, Mr. Daniel Edewor confirmed the incident but declined to comment on the two month long reported gas leakage, saying, "our mandate is to assess the extent of the damage."

The Tide Online is published by Rivers State Newspaper Corporation

MILITARY WARNS OF LNG SITE CONFLICTS: OFFSHORE TERMINALS MAY AFFECT TRAINING, STATE LAWMAKERS TOLD

By Timm Herdt, therdt@VenturaCountyStar.com
October 28, 2005

http://www1.venturacountystar.com/vcs/county_news/article/0,1375,VCS_226_4193856,00.html

SACRAMENTO -- Leading West Coast officials of the Navy and Marines told a state legislative panel Thursday that regulatory agencies overseeing the siting of liquefied natural gas terminals should strongly consider their potential effects on military training and preparedness.

Marine Brig. Gen. Michael Lehnert told lawmakers that to date, 397 Marines and sailors from Southern California have died in combat in Afghanistan and Iraq, an additional 97 killed in accidents and more than 6,000 wounded.

"That weighs heavily on my mind," Lehnert said. "Any type of encroachment ... that causes us to have to train differently from the way we are going to have to fight is a cause of concern to us."

Lehnert and Navy Capt. Michael Allen said their agencies are preparing a report that will be sent up the Defense Department chain of command. It will address potential conflicts between offshore military training exercises and both the sites of proposed LNG terminals and the routes of tankers that would dock at those terminals.

Two of those proposals envision terminals off the Oxnard coast -- one a floating terminal sought by the Australian energy firm BHP Billiton and the other a conversion of an existing offshore oil rig by Crystal Energy.

The issue of potential military-commercial conflicts with LNG facilities was highlighted this summer, when Navy officials joined with the Massachusetts and Rhode Island attorneys general in seeking a rehearing on an LNG permit at Fall River, Mass., issued by the Federal Energy Regulatory Commission.

Attorneys for the Naval Undersea Warfare Center asserted a security zone around LNG tankers would "significantly and adversely impact in-water testing."

California regulatory officials testified the BHP proposal, furthest along in the review process, is expected to have a completed environmental impact statement sometime in the spring, and Gov. Arnold Schwarzenegger could make a decision on the project by summer.

Under federal law, an offshore terminal must be approved by the U.S. secretary of transportation, but only with the consent of the governor of the state that is connected to it by pipeline.

Allen said that while the Navy was invited to comment on the proposed shipping routes to and from the BHP terminal, it has not had the opportunity to comment formally on the proposed site. The opportunity to do so "would be extremely useful," Lehnert said.

Allen said the just-concluded round of base closings and realignments "validated the importance" of the military's sea and air test ranges in California. "The LNG siting does have some impact on those ranges," he said.

Onshore terminals, including one proposed in Long Beach, are under the purview of the FERC.

Mark Robinson of the commission told lawmakers that under the 2005 Energy Act, his agency cannot approve a project if the secretary of defense finds it is incompatible with the nation's military needs.

Navy weighs in against planned Fall River LNG terminal
By Steve LeBlanc, Associated Press Writer | August 15, 2005

BOSTON --The U.S. Navy has asked federal regulators to reconsider their approval of a proposed liquefied natural gas terminal in Fall River, sayingthe comings and goings of the massive LNG tankers will disrupt Navaloperations in nearby Newport, R.I.

The Navy tests submarines, torpedoes and sonar systems at its Naval Underwater Warfare Center, which is located on Narragansett Bay near the channel the tankers would use to get to Fall River.

The Federal Energy Regulatory Commission recently approved the proposed terminal by a 3-1 vote, saying the project meets safety standards.

Each time a tanker approaches a terminal, the Coast Guard imposes wide safety zone to keep all other vessels away. That safety zone "will significantly and adversely impact water testing ... essential to the Navy and the security of the nation," the Navy said in a motion filed Friday with the commission.

Over the next three years, the Navy plans to test wireless underwater vehicles five to seven times a week in the area that would need to be shut down each time a tanker approached. The Navy also said it had not been consulted by Weaver's Cove, the company proposing the $250 million LNG terminal.

The Navy joins a host of elected officials -- including Republican Gov. Mitt Romney -- who oppose the project, saying it poses a safety hazard. Fall River Mayor Edward Lambert said the Navy's concerns only add to the pressure to reopen the decision-making process. "I don't think you can underestimate what this might mean," he said. "They (the Navy) have information that hasn't been considered."

Marcia MacClary, a consultant for Weaver's Cove, said the company is in the process of reviewing the document.

Attorney General Thomas Reilly said the Navy's concerns should prompt FERC to reconsider its decision. "We already knew that FERC was ignoring the safety concerns of the people of Fall River," Reilly said. "Now we know that they are not even on the same page with other federal agencies."

Last week, local officials cited another potential problem with the proposal, pointing to a provision tucked into the federal highway bill signed by President Bush.

The provision, pushed by Rep. James McGovern, D-Mass., bans the demolition of the existing Brightman Street Bridge over the Taunton River even after a new bridge designed to replace it is completed. If the narrow old drawbridge stays put, the massive tankers used to transport the liquefied fuel won't be able to complete their trip to the planned LNG facility.

The language in the highway bill provides $500,000 to renovate the old bridge and turn it into a pedestrian walkway, bike path and road for emergency vehicles.

LNG is natural gas supercooled until it turns to liquid so it can be shipped. If released, it becomes a colorless, odorless vapor that can catchfire and explode in a confined area.

STATE OF CALIFORNIA -- THE RESOURCES AGENCY
ARNOLD SCHWARZENEGGER, *Governor*

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W 3

MEMO

May 3, 2004

TO: **Commissioners and Interested Persons**

FROM: **Peter Douglas, Executive Director**

RE: **Protecting Views from the Ocean Under the Coastal Act**

INTRODUCTION: The Commission has asked for a summary review and discussion of actions protective of scenic coastal resources and specifically the protection of views from the ocean to the land. The protection of scenic values along the California coast, together with public access, is a principal driver underlying continuing strong public support for effective coastal management.[1] The premiere objective of the California Coastal Plan called for in the California Coastal Zone Conservation Act of 1972 (Proposition 20 – a citizen's initiative) was: *The maintenance, restoration, and enhancement of the overall quality of the coastal zone environment, including, but not limited to, its amenities and aesthetic values."*[2] The "coastal zone" was defined in the initiative as extended from three miles at sea inland to a specifically delineated boundary.

The California Coastal Act of 1976 made permanent the Coastal Commission and established the conservation and use policies guiding planning and regulation of land and water areas in the new coastal zone established by that law. Specifically, relative to the protection of scenic values, the Act provides that:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas,* [emphasis added] *to minimize the alteration of natural land forms, to be visually*

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[1] See Public Policy Institute of California Statewide Survey: Special Survey of Californians and the Environment, November 2003 (this survey focused on public attitudes toward and support for coastal protection)

[2] Section 27302 (a) Public Resources Code (repealed January 1, 1977 and replaced by the Coastal Act).

> *compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas....*[3]

Section 30009 PRC requires that *"[The Coastal Act] shall be liberally construed to accomplish its purposes and objectives."*

The Coastal Commission has implemented scenic resource protection policies primarily by focusing on land-based scenic views from public parks, trails, roads and vista points. Over the years however, and in recognition of changing recreational use patterns and input from the boating community, the Commission began calling for protection of landscape views from state ocean waters (3 miles) in rural areas of the coast that are essentially devoid of development as well as other areas having unique landforms even in built environments. This position takes into account the fact that boating is and will continue to be an increasingly important form of coastal recreation that is also called out for protection in the Coastal Act. (See section 30224 PRC.) The conceptual basis for this position is quite simple: Like scenic vistas from upland public places, the enjoyment of uncluttered views from the ocean to and along California's magnificent coastline is a public resource and aesthetic value of importance to substantial numbers of current and future coastal users. It is an important public interest – a coastal resource worthy of protection.

Protecting views from the ocean: While the primary focus of the Commission's application of the scenic resource protection policies of the Coastal Act has been from the edge of the sea along the coast and inland, as well as other vistas in the coastal zone, views from the ocean to the land have also been taken into account. Viewsheds include views from a particular place on land to and along the ocean and scenic coastal areas as well as from the ocean toward the land and along scenic coastal areas. Generally, viewsheds from the ocean toward land that have been considered important enough to warrant protection through siting, design, landscaping and other measures have most often included geographic reaches of coast that are rural in character and relatively unaltered by human activity. However, in some unique situations scenic values as enjoyed from coastal waters have also been taken into consideration and protected in urban areas such as Marina Del Rey and Point Loma in San Diego.

The protection of scenic values in unique geographic places on the planet is receiving increased attention from government as population grows and tourism becomes a greater part of national and local economies. Because increasing numbers of people enjoy scenic vistas from places on or in the water (i.e., coastal ocean waters, seas, lakes, rivers, great ponds, estuaries, etc.), protecting such public values and resources has become a recognized and legitimate land and water use planning and regulation objective. A recent court decision upholding rules designed to protect views from the waters of lake Tahoe

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[3] Section 30251 PRC.

illustrates the recognition of the importance of such vistas as scenic resources worthy of protection.[4] Another example is the state of Maine, which last year amended its coastal management program to include specific scenic resource protection policies including protection of views from bodies of water toward land.[5]

Recreational boating and other recreational water uses (i.e., paddle sports, surfing, diving) along the California coast are becoming more popular as population increases and interest in and opportunities for such outdoor recreation correspondingly increase. Sailing, motor boating, sea kayaking and sport fishing all involve uses of the coastline where the quality of the recreational experience is affected by aesthetics involving the nature and character of views from the water toward the land. (This summary report is not intended to explore the intangible elements of scenic values and the human psyche important to the perception of aesthetic quality of coastal recreational experiences.) Given the way the Coastal Act has been implemented over time, planning and regulatory decisions relative to the protection of coastal scenic resources are made on a case-by-case basis. This approach allows the Commission and local governments carrying out local coastal programs to be adaptive as public needs, information and circumstances change. This flexibility is a hallmark of California's coastal management program. Additionally, if the Commission adopts a categorical or mandatory policy of general application on the subject it would need to go through the rule-making process and review by the Office of Administrative Law resulting in the adoption of inflexible regulations.

Examples of prior actions:

Los Angeles County LCP for Santa Catalina Island (1983): This LCP, approved twenty years ago, contains several policies specifically calling for the protection of views from the water toward the land. (LUP certified in 1983. LCP ordinances certified with modifications in 1989.)

CDP 6-94-159: City of San Diego, Metropolitan Wastewater Department. This project was for the construction of a new 7,030 square foot pump station. Potential adverse scenic impacts for boaters using offshore waters were addressed through landscaping and design conditions.

CDP 6-95-103: City of San Diego, Metropolitan Wastewater Department. The project included a new control building, digester tanks, holding tank, retaining walls, and landscape berming. Because the project would impact offshore views, special conditions relating to landscaping and color treatment were imposed by the Commission.

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[4] *The Committee for Reasonable Regulation of Lake Tahoe v. Tahoe Regional Planning Agency*, U.S. District Court for Nevada (March 29, 2004).

[5] See Attachment A

Marina del Rey Land Use Plan (County of Los Angeles, February 8, 1996): In approving this land use plan portion of the County's LCP, the following policy was adopted:

> ***Main Channel View Corridor.*** *To preserve views of the Santa Monica and San Gabriel Mountains from the main channel,* [emphasis added] *no structure over 40 feet in height shall be constructed on the eastern-most 300 feet of parcel 125, or on parcels 129, 130, 131, and the panhandle portion of parcel 132, or along Admiralty Park (parcels RR and SS).)*

CDP 6-96-45: City of San Diego, Metropolitan Wastewater Department. This project involved construction of shoreline protection (rock revetment), bluff-face stabilization work, and new parking facilities. Offshore visual impacts were addressed through project design features and special conditions.

CDP Appeal: A-2-Mar-02-024 (Hansen and Brubaker). Although the project was withdrawn after the Commission's staff report was published and the Commission never had the opportunity to act on this appeal, a major issue in the staff report dealt with the adverse visual impacts the project would have on views both from nearby public parklands as well as from the waters of Tomales Bay. Public opposition also focused on these impacts, as did that of the National Park Service and State Parks.

The proposed project was for a one story, 23-foot high, 3,113-square-foot single family residence, 336-square-foot detached guest house, 937-square-foot detached garage and a garden storage building and 26.5-foot high, 1,920-square-foot detached barn/equipment storage building on a 207 acre parcel. The Commission received two appeals of the County's approval of the proposed development contending, among other issues, that the approved development is inconsistent with local coastal plan visual resource protection policies because it is sited in a visually prominent location on the parcel, is not compatible with the character of the surrounding natural environment, and obstructs significant views as seen from public viewing places, including the waters of Tomales Bay. The staff recommended denial because of the project's adverse impacts on scenic resources and recommended that the project be redesigned and the structures resited in a less visually prominent location of the property. After the staff report was published, the applicant dropped the project.

CDP Appeal: A-3-SLO-99-014 and A-3-SLO-99-032 (Morro Bay Limited, a.k.a. Sea-West Ranch). This project involved lot reconfiguration and the development of 8 large residential structures on 746 acres of agricultural land on the rural relatively undeveloped Harmony coast in San Lois Obispo County. (See description relative to the Schneider appeal below.) The Commission approved the project, requiring resiting and

redesign to protect scenic resources, including views from state waters (from shoreline to 3 miles offshore). The adopted summary findings supporting the Commission's action included the following:

> *All future development will need to comply with siting and design criteria to protect views from public viewing areas, including state waters. Specifically, development must be designed to blend in with and be subordinate to the natural landscape, including limiting height and vertical features above ridgelines; using earthtones and non-reflective materials; and limiting exterior lighting (see Condition 3i for more detail).*

CDP Appeal: A-3-SLO-00-040 (Schneider). The proposed project application on 40.6 acres of the seaward facing coastal terrace of the rural Harmony coast was for a 10,000 square foot single-family residence, a 2,500 square foot barn and improvement of a 1.25 mile access road. The adopted report describes the area and issue relative to scenic resource protection as follows:

> *...The Harmony coastline is characterized by wind swept hills and wide coastal terraces dropping off dramatically to the rocky shores of the Pacific Ocean below. Because the surrounding Harmony coast area is substantially undeveloped rural open space, any development in this area poses the potential for adverse impacts in terms of protecting the areas valuable scenic qualities.*
>
> *There is no question that the current development proposal would significantly impact the scenic quality of the rural Harmony coast. ...[T]he proposed development would be located on the flat undeveloped marine terrace typical of this stretch of coastline. The potential for similar proposals immediately to the north and south of the project site raises concerns about the cumulative impacts of development and its associated landscaping and landform alteration on the coastal terrace. The limited developments that can be seen in this general area (Abalone Farm and Williams residence) provide evidence of the visual impacts that can result from inappropriately designed development in this sensitive area. Moreover, given the scenic nature of this stretch of coast, it is that much more important to limit any additional development that would break up the expansive views of the grassy marine terraces and coastal hills and incrementally degrade the rural agrarian character of the Harmony coast. Thus, the greatest possible effort must be made to safeguard this area from the intrusion of unsightly new development.*
>
> *The project poses adverse impacts to visual and scenic resources through development of a 1.25-mile access road, a 2,500 square foot barn, and 10,000 square foot residence on the undeveloped coastal terrace and hillsides of the Harmony coast. These developments are visible, depending on the viewpoint, from public viewing areas. The access road is visible from Highway One,*

offshore areas, [emphasis added] and from other inland vantage points. The large residence and barn are visible from coastal waters [emphasis added] and inland vantage points upcoast from the project site, particularly the 746-acre SeaWest Ranch recently purchased by the American Land Conservancy for resource conservation and public open space.

Policy 2 for Visual and Scenic Resources addresses site selection for new development. The policy serves to protect the unique qualities of scenic areas and prohibits the siting of development, where possible, in areas visible from public view corridors. In addition to the scenic views from Highway One and other inland areas, Policy 2 protects views from near-shore waters. In other words, the views of fishers, boaters, kayakers, surfers, et cetera who may be present at different times in the water should also be considered. [emphasis added] Because of the sheer cliff edge and the relatively flat marine terrace, the proposed development (i.e. residence, lounge, barn, access road improvements, water tanks, etc.) would be highly visible, particularly from near-shore waters. [emphasis added] The windswept ridges and flat marine terrace area is covered with dry grasslands and some maritime chaparral at higher elevations, limiting the amount of natural screening available to shield the development from public view ....

As described, the project also includes improvements to a dirt jeep trail that traverses three other parcels extending from Highway One over the coastal range to the marine terrace site. The road generally follows the route of the existing dirt jeep trail, however a portion of it deviates from the route in high hazard and sensitive resource areas. The County approval includes a variance because the access road will require grading on slopes greater than 30 percent. The existing dirt jeep trail in this area would be widened and paved, as CDF requires roads to be paved that have a slope greater than 12%. Travelers in both directions on Highway One will see the paved road as it ascends the inland side of the coastal range to the top of the ridgeline. As evidenced in visual simulations, the large cutslopes necessary to support a road on the steep hillside will also be highly visible from the ocean. [emphasis added]. ...

Following concerns raised by the Commission with respect to site selection, a series of visual resource studies were conducted to evaluate the project impacts of the residence and barn on public view corridors.[6] A number of alternative building sites were evaluated on both the ridgetop and the marine terrace. A variety of different public viewpoints were evaluated. At all ridgetop locations evaluated, the residence and barn silhouetted against the skyline in clear view from major public viewing areas, particularly along Highway One. Based on the visual simulations, it was concluded that the marine terrace portion of the

[6] Visual Analysis (Cannon Associates, October 2000 and May 2003) and (Sheppard Mulllin, August 2002).

property was the least visible portion of the property. Thus, in terms of site selection, the Commission can concur that the location of the homesite on the general marine terrace area is preferred.

However, as required by Policy 4 for Visual and Scenic Resources, "new development shall be sited to minimize its visibility from public view corridors" and the structures in that area "shall be designed to be subordinate to, and blend with, the rural character of the area." In addition, Policy 1 for Visual and Scenic Resources requires that the scenic rural landscape of the Harmony coast be preserved and protected. Policy 4 also allows for the use of native vegetative screening to shield development so long as it does not obstruct major public views, but only after all efforts have been exhausted to site the development outside of public view corridors (including views from offshore). ... [emphasis added]

There is no question that Visual and Scenic Resource Policy 4 of the LCP sets a high standard for protection of the extreme sensitivity of the Harmony Coast. The controlling objective of Policy 4 is to design new structures as to be subordinate to and blend with the rural character of the landscape. There are at least two general themes to test for consistency in this case: 1) compatibility with the surrounding built environment, namely the immediately surrounding large agricultural parcels with farm buildings and individual residences; and 2) compatibility with the overall open space environs of the larger Harmony coast area.

Consistency with the character of the built environment can be evaluated primarily on architectural style and overall mass/scale. In terms of architectural style, although it might be argued that the modern residential style of the Schneider project is quite architecturally interesting, it could not be said to be similar to the existing character of development in the area. The Schneider project has angular corners, large paned glass windows, an indoor swimming pool, spiral stairs leading to rooftop viewing areas, and pyramid like skylights that would be unlike any other farm buildings or residences in the immediate area. Moreover, the proposed Schneider house would be substantially larger; at least twice or three times the square footage of the largest neighboring home. As such, its large overall square footage raises an issue in terms of compatibility with the surrounding built environment. In fact, the proposed structure would be one of the largest, if not the largest, residence on the entire San Luis Obispo County coastline.

In terms of compatibility with the larger rural agricultural Harmony coast, such large residential development is distinctly counter to the character of this greater area. While a limited number of residences have been developed on the terrace well to the north of this area, this particular stretch of the Harmony coast

surrounding China Harbor and Point Estero is largely undeveloped. From offshore, the downcoast commercial abalone farm is clearly visible. As shown in the applicant's visual resource analysis, a mix of machinery, discharge pipes, growing pens, outbuildings, equipment and roads visually mar the marine terrace area to the detriment of the rural coastal aesthetic (See Exhibit 4). The presence of this unsightly development provides a reference point for understanding how the construction of buildings along the Harmony blufftop can change the rural open space character of this stretch of coastline.

In order to find the project consistent with the LCP's visual and scenic resource protection policies, the project must be modified. Every reasonable effort must be made to assure that new development in this area is truly subordinate to, and blends with the rural landscape. In light of the extreme visual sensitivity of the Harmony coast, the Commission finds that the residence must be relocated and reduced in size and scale to meet the high standards of the LCP (see Special Condition 2).

Special Condition 2 will help address multiple issues at once. First, it will reduce the length of the improved access road/driveway by around 1,100 feet, thereby minimizing the amount of cut and fill on the visible hillside.... Second, it will reduce the amount of ground disturbance by at least 20,000 square feet. Third, it will reduce the scale and mass of the residential structure to that more nearly approximating an agricultural residence. Fourth, eliminating the barn (which serves no agricultural function) from the project will help reduce the visual impacts of multiple structures loosely arranged along the marine terrace. Finally, Special Condition 2 limits the height of the residence to a maximum of 12 feet as measured from average natural grade to reduce the visible profile of the residence. Building materials must be non-reflective and use only earth-toned colors. No exterior lighting is allowed other than the minimum mount necessary for pedestrian and vehicular safety.

The LCP requires that landform alteration be minimized; however, it does allow such alteration if done in a way to blend with adjacent natural terrain (Visual Policy 5). Siting and design options that rely on natural looking berms, rather than vegetative screening alone best meet the intent of the LCP Visual Resource policies for this particular portion of the Harmony coast. Thus, Special Condition 2(f) requires the Applicant to install a low berm (ranging from two to three feet in height) directly adjacent to the residence. The berm shall be vegetated with low stature native grasses and forbs to mimic the surrounding landscape. This requirement, combined with the reduction in structural height, will reduce the visibility of the residence within the viewshed to roughly 10 feet above the top of the berm.

As proposed, the project does not meet the visual and scenic resource protection standards of the LCP because additional measures can be taken to make the development subordinate to, and blend with, the rural character of the area. The conditions of approval bring the proposed project into compliance with these LCP policies and recognize the need to protect the rural open space landscape of the Harmony coast....

Periodic Review of Monterey County's LCP (Big Sur) (March 2004): The Coastal Act requires periodic review by the Commission of previously certified LCPs to ensure they are being carried out in a manner consistent with contemporary public needs taking into account changed circumstances and new information. Notwithstanding requirements of law, due to lack of resources and the absence of meaningful measures in the Coastal Act to ensure implementation of recommended changes to an LCP that derives from such review, the Commission has only undertaken five periodic reviews (dozens are past due for review). Although the staff completed a preliminary review of Monterey County's LCP, this review has not been acted on by the Commission. The staff report, presented to the Commission at its March meeting in Monterey, generated considerable public testimony – much of it focused on the recommended policy modifications calling for the protection of scenic resources viewed from the ocean.

The following is a summary of the staff's report and recommendation relative to the Monterey County local coastal program. Ocean views are discussed under the section entitled "Other Visual Resource Issues"[7]:

Commission experience with County permitting also indicated that while the County does consider views from some beaches (those in North County and throughout Big Sur Coast), it generally has not considered views from vantage points located along the shoreline or offshore. Recommendations have thus been made for requiring consideration of these views where warranted.

Recommendation about views from offshore areas are excerpted from Appendix A, part 2 (see Appendix A for specific Land Use Plan and Implementation Program recommended changes):

ISSUE SR-4: Views from Offshore -Ensure that important views from the beach and ocean are protected.

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[7] For more information on protecting the Big Sur Critical Viewshed, see pages 29-30; also see Chapter 7 in Draft Findings staff report of 11.26.03 for background info. All documents regarding Periodic Review can be found on the Commission's website at: http://www.coastal.ca.gov/recap/rctop.html

Summary Comment: The current Local Coastal Program has many viewshed protection policies. However, they do not specifically identify the ocean waters as vantage points in applying these policies. Only North County and Big Sur and to some extent Carmel identify beaches as vantage points. Thus, there could be some development approved that would be intrusive to beach goers or ocean users.

Recommendation Summary: Adopt policy to protect views from the beach and ocean.

Federal Consistency Reviews: The Commission has unique authority to review federal activities that could affect coastal resources. These reviews involve evaluating federal activities to ensure that they are consistent with California's federally approved Coastal Management Program (CCMP).[8] In these reviews, coastal views from the ocean have been considered scenic resources warranting protection pursuant to the CCMP. Summarized below are five cases (this is not an exhaustive listing) in which the Commission considered potential adverse impacts on views from ocean waters.[9]

CD-31-03, Army Corps, East Cliff Drive, Santa Cruz:

The proposed project by the ACOE involves installation of a large shoreline protective structure, removal of the abandoned restroom, covering the existing bluff (and the cribwalls) with sculpted concrete, and removal of the rubble and rip-rap strewn across the beach. Although this will help improve the viewshed in part (e.g., removal of rip-rap and rubble), and although the project would be made to mimic natural bluffs, it would still introduce a concrete and artificial structure into the significant public recreational viewshed, replacing the natural landform with an artificial one. Public views from the beach, from offshore, and from East Cliff Drive would be negatively affected....

...This bi-level path modification would accomplish several coastal resource objectives. First, the railing's prominence in the beach and offshore viewshed would be reduced because it would be seen against the backdrop of the grade separation and vegetation that would be located between the two components of the recreational trails. Second, the view of the ocean from the paved recreational trail as well as from East Cliff Drive itself would be enhanced because the railing would be lowered out of it, thus reducing view blockage and clutter. Third, the overall extent of seawall would be reduced by 3 feet along the top of the seawall – eliminating 3,300 square feet artificial concrete "bluff" from the overall viewshed

[8] The enforceable policies of the California Coastal Act constitute the applicable CCMP policies.

[9] CD-31-03, Army Corps, East Cliff Drive, Santa Cruz; CD-25-01, Navy tower, Point Loma; CD-74-00, Army Corps Breakwater, Palos Verdes; CC-42-94, Air Force/ Western Commercial Space Center, Vandenberg Air Force Base; CD-19-93, Air Force, Hardware Storage Facility, Vandenberg Air Force Base

beach and offshore viewshed, and reducing its impact. Fourth, the grade separated pathway would provide better user separation to help avoid conflicts between faster moving wheeled users (in the paved portion above) and slower moving pedestrians (in the lower portion below). Fifth, the grade separation would provide a more interesting character and aesthetic (than would a relatively flat Parkway area) that would be more in keeping with the Pleasure Point's community character. And finally, there appears to be adequate blufftop space available to accomplish such a design change in the project area.

CD-25-01 Navy tower, Point Loma: Naval Base Point Loma, near Cabrillo National Monument, southern end of Point Loma peninsula, San Diego - Construction of 100 ft. high steel communications tower to support combat system testing and training:

The project site is a federally-owned, previously-disturbed site which has been used for various military purposes since World War II. However, being located near a heavily used visitor center and historic lighthouse ("Old Lighthouse") at the Cabrillo National Monument, and on a high promontory overlooking the Pacific Ocean and San Diego Bay, it is a highly scenic site. The National Park Service describes the views from the nearby Cabrillo National Monument as "commanding," stating in its General Management Plan:

> *From its 420 foot elevation, the monument offers a commanding view of San Diego and its bay and adjacent cities to the north, east, and south; Mexico to the far south; and the Pacific Ocean to the west.*

The National Park Service has expended considerable efforts to redesign its facilities to improve the aesthetics in the project area and increase the scenic qualities of the public views available at the Monument (see ND-46-00). The project site is located 1672 ft. (0.3 mi.) south of the historic, publicly accessible Old Lighthouse, at a ground level elevation just over 100 ft. lower than the lighthouse. Nevertheless, due to the 100 ft. height of the tower, and the topography of the area, the project would be visible from the lighthouse, as well as a number of other publicly accessible locations, including the road down the western slopes to the tidepools, the nearby Whale Overlook (located south of Old Lighthouse), the southernmost portions of the hiking trail leading from Old Lighthouse down the eastern slopes of the end of the Point Loma peninsula (Humphrey Rd./Sylvester Rd.), and from the Pacific Ocean and San Diego Bay on three sides of the Point Loma promontory (i.e., from coastal waters to the west, south, and east). [emphasis added] In essence, the same Navy needs for unobstructed lines of communications between the tower and ships at sea are the reasons for its visibility from a large number of surrounding locations. Thus, particular care needs to be taken to site and minimize the tower's impact on scenic public coastal views.

CD-74-00 Army Corps Breakwater, Palos Verdes:

> *Offshore of Portuguese Bend cove, Palos Verdes Peninsula, City of Rancho Palos Verdes. The shoreline around the Palos Verdes Peninsula is a highly scenic area. It consists of rolling hills with dramatic cliffs and bluffs at the shoreline. The visual character of the area is appreciated from both public areas on land and boats viewing the area from offshore. [emphasis added] The proposed project would add a major human development in the offshore area. The proposed dike would be approximately a half-mile long and 24 feet above mean lower low water and very visible from upland and offshore areas. [emphasis added] Since the bluffs and beaches in this area are relatively undeveloped, this massive dike would not be subordinate to the natural coastal character of the area.*
>
> *In its EIS, the Corps concludes that the project's visual impacts are not significant because of the offshore turbidity and scarred nature of the bluffs caused by the landslide. The Commission disagrees with this conclusion.*

CC-42-94, Air Force/ Western Commercial Space Center, Vandenberg Air Force Base: The project consisted of construction and operation of a commercial spaceport within and adjacent to the existing launch facility, SLC-6:

> *The project will be visible from offshore areas,* [emphasis added] *but since the project will be located adjacent to an existing much larger launch facility, the project is consistent with character of the surrounding area. Therefore, the Commission finds that the proposed launch facility is consistent with the visual resource policies of the CCMP.*

CD-19-93, Air Force, Hardware Storage Facility, Vandenberg Air Force Base:

> *The project may be visible from offshore areas. [emphasis added] However, the site is already visually degraded because it has been previously disturbed and it is used to store equipment and material. Additionally, this area of the base is developed with several launch and launch support facilities. The proposed development is consistent with the existing development in the vicinity. Therefore, the Commission finds that the project is consistent with the visual resource policy of the CCMP.*

Conclusion: The examples summarized above do not include all actions by the Commission and staff pursuant to the Coastal Act that are protective of scenic coastal resources relative to the protection of views from coastal waters. Nor do they include

actions taken by local government pursuant to their LCP protective of views from the ocean. The point is that the Commission has a history of expressing concern for and being proactive in protecting scenic resources that involve views from coastal waters.

Coastal recreation comes in many forms, as do uses of coastal waters. The Commission is well aware that ocean recreational uses are increasing as population grows and the technology relating to water sports equipment advances (e.g., paddlecraft, wet suits, wind surfing, kite surfing, surfing) as more people turn to the ocean for water oriented recreational activities. The Commission has long been pro-active in promoting sailing and boating opportunities for people who cannot afford their own boats through community sailing and boating programs for all ages.[10] This policy is consistent with Coastal Act provisions calling for the protection and expansion of lower cost recreational opportunities.

Like hikers and other landside visitors to the coast, people who come down to the seashore to be on the water are a community of users whose enjoyment of the coast for recreation, to find solace and inspiration, or to be with wild nature is also deserving of careful stewardship. While the quality of a sojourn at land's edge, whether on land or sea, is subjective and immeasurable, it marks the spirit and is integral to how people value their experience. Protecting special seascapes by minimizing the intrusion of human works, particularly along rugged reaches of rural coast, is a powerful objective of worth and value to current and future generations.

Attachment A: State of Maine Scenic Protection Policies

[10] Earlier this year at the national convention of the United States Sailing Association, the Commission received a special award for "preserving California's coastline, providing public access to the waterways, developing marine environmental education, and supporting community sailing."